

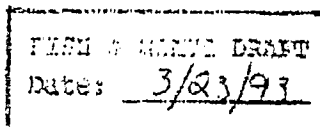
BOX AF

PATENTS  
PM-1414

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

## PATENT APPLICATION

Applicants : W.R. Raymond et al.  
Serial No. : 07/789,979  
Filed : November 12, 1991  
For : FRACTIONATED PLANT EXTRACTS USEFUL AS  
FLAVORANTS AND ENHANCERS THEREOF AND  
METHODS FOR PREPARING AND USING THE SAME  
Examiner : Paul Prebilic  
Group Art Unit : 3308

New York, New York 10020  
March \_\_, 1993BOX AF  
Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231RESPONSE UNDER 37 C.F.R. § 1.116  
TO EXAMINER'S ACTION

Sir:

In response to the final Examiner's Action, dated January 28, 1993, applicants hereby propose the following amendment of the above-identified patent application:

IN THE CLAIMS

1. (twice amended) A process for producing and isolating intermediate molecular weight fractions from plant extracts, which fractions are substantially non-volatile and stable under ambient temperature conditions and are useful as flavoring agents, comprising:

- (a) contacting plant matter with a solvent to produce a crude plant extract;
- (b) concentrating said crude plant extract; and
- (c) subjecting said concentrated crude plant

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extract to size exclusion process to provide intermediate  
molecular weight fractions having a molecular weight in the

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range from about 600 Daltons to about 100,000 Daltons, wherein said size exclusion process separates on the basis of a physical parameter to provide the intermediate molecular weight fractions and is a size exclusion chromatography process.

30. (twice amended) The process according to claim 4, wherein said size exclusion chromatography process of step (c) is selected from the group consisting of gel filtration chromatography and gel permeation chromatography, and said plant extract fractions are concentrated in step (d) by a method selected from the group consisting of reverse osmosis, microfiltration, ultrafiltration, nanofiltration, hollow fiber diafiltration and any combination thereof.

31. (twice amended) The process according to claim 30, wherein said size exclusion chromatography process is gel filtration chromatography and uses a column packing selected from the group consisting of neutral cross-linked dextran and polyacrylamide gels.

46. (twice amended) The process according to claim 45, wherein [the constituents of] said [fractionated tobacco extracts] intermediate molecular weight fractions have a molecular weight in the range from about 1,000 Daltons to about 15,000 Daltons.

47. (twice amended) The process according to claim 46, wherein [the constituents of] said [fractionated tobacco extracts] intermediate molecular weight fractions have a molecular weight in the range from about 1,500 Daltons to about 5,000 Daltons.

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54. (amended) The process according to claim 1, wherein [the constituents of] said [fractionated tobacco extracts] intermediate molecular weight fractions have a molecular weight in the range from about 1,000 Daltons to about 15,000 Daltons.

55. (amended) The process according to claim 54, wherein [the constituents of] said [fractionated tobacco extracts] intermediate molecular weight fractions have a molecular weight in the range from about 1,500 Daltons to about 5,000 Daltons.

56. (amended) The process according to claim 38, wherein the [cation exchanger] ion exchange material has a molecular weight fractionation range/nominal exclusion limit of about 1,000 to about 5,000 Daltons.

In claim 62, line 9, change "yeilding" to  
-- yielding --.

#### REMARKS

##### Summary of Examiner's Action

Claims 1-64 were pending in this application.

Claim 48 was withdrawn from consideration as being drawn to a non-elected invention.

Claims 1, 4, 5, 10, 11, 21, 24, 33, 34, 54, 55, 62 and 63 were finally rejected under 35 U.S.C. § 102(b) as anticipated by Tsay et al. U.S. patent 4,716,120.

Claims 12-15, 17-20, 22, 23, 25-29, 35, 36, 40-47 and 49-52 were finally rejected under 35 U.S.C. § 103 as being unpatentable over Tsay et al.

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Claims 2, 3, 6, 30-32, 53 and 64 were objected to as depending upon a rejected base claim but would be allowable if rewritten to depend upon an allowable base claim.

Claims 7-9, 16, 37-39 and 57-61 were indicated to be allowable.

Claims 54-56 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention. Otherwise, claim 56 was indicated to be allowable.

#### Summary of Applicants' Response

Applicants have proposed amendments to claims 1, 30, 31, 46, 47 and 54-56 in order to more particularly define and distinctly claim the invention.

The Examiner's objections and rejections are respectfully traversed.

#### Summary of Telephonic Interview

The undersigned and the Examiner conducted a telephonic interview on March 23, 1993. The undersigned wishes to thank the Examiner for the courtesies extended during the interview. In accordance with 37 C.F.R. § 1.133(b), applicants make of record the substance of that interview.

Applicants' attorney submitted that the Tsay et al. patent does not show or suggest claim 62 of the application which is directed to a process for producing a tobacco flavoring agent, including a "size exclusion chromatography" step. Applicants' attorney drew the Examiner's attention to page 11, line 25 to page 12, line 2 of the application where size exclusion chromatography and ultrafiltration are identified as two different types of size exclusion processes. Applicants'

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attorney also drew the Examiner's attention to col. 3, lines 37-41, of the Tsay et al. patent.

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Applicants' attorney indicated that this Response would be filed with a proposed amendment to claim 1 wherein the size exclusion process is identified as a "size exclusion chromatography process." The Examiner indicated that he would consider the above remarks.

Affirmation of Provisional Election

Applicants affirm the telephonic provisional election of the invention of claims 1-47 and 49-64 (Invention I) for prosecution in this application. Such election is made without traverse, but is made expressly without waiver of applicants' right to pursue the invention of claim 48 (Invention II) in one or more divisional applications.

Applicants' Response to the  
§ 112, Second Paragraph, Objections

Claims 54-56 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. These rejections are respectively traversed.

Applicants have proposed amendments to claims 54-56 to delete their reference to phrases lacking antecedent basis. Applicants have also proposed amendments to claims 46 and 47 for similar reasons.

Applicants' Response to the  
Prior Art Rejections Based on Tsay et al.

Claims 1, 4, 5, 10, 11, 21, 24, 33, 34, 54, 55, 62 and 63 were finally rejected under 35 U.S.C. § 102(b) as being anticipated by Tsay et al. U.S. patent 4,716,120. Claims 12-15, 17-20, 22, 23, 25-29, 35, 36, 40-47 and 49-52 were finally rejected under 35 U.S.C. § 103 as being unpatentable over Tsay

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rejected. Extended Page 7.1  
at al. These rejections are respectfully traversed.

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Applicants have proposed to amend independent claim 1 to more particularly define and distinctly claim the invention, which is directed to a process for producing and isolating intermediate molecular weight fractions from plant extracts. Claim 1, as proposed to be amended, includes a step of subjecting concentrated crude plant extract to a "size exclusion chromatography process." Applicants respectfully submit that Tsay et al. does not show or suggest claim 1, as proposed to be amended.

Applicants also respectfully submit that Tsay et al. does not show or suggest claim 62 of this application.

At least for the above reasons, applicants respectfully submit that dependent claims 4, 5, 10-15, 17-29, 33-36, 40-47, 49-52, 54, 55 and 63 are also not shown or suggest by Tsay et al.

#### CONCLUSION

For the reasons set forth above, applicants submit that this application, if amended as proposed, would be in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested.

It is respectfully requested that the Examiner telephone the undersigned to discuss the status of this application after consideration of this Response.

Respectfully submitted,

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